

40 years
1968-2008



Docket No.: 336549US



COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

ATTORNEYS AT LAW

RE: Application Serial No.: 09/139,307
Applicants: SHIRAKAWA, Takahashi
Filing Date: August 24, 1998
For: THERMAL HEAD
Group Art Unit: 2861
Examiner: Tran

SIR:

Attached hereto for filing are the following papers:

Issue Fee Transmittal
Letter Submitting Replacement Drawing Sheets
Notice of Allowability Dated June 3, 1999 (copy)
PTO Form 948 Dated November 12, 1998 (copy)
6 Replacement Drawing Sheets

Credit card payment is attached hereto in the amount of **\$1,510.00** to cover any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. **15-0030**. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Richard L. Treanor
Registration No. 36,379

Customer Number

22850

(703) 413-3000 (phone)
(703) 413-2220 (fax)
(OSMMN 10/08)

Tia D. Fenton
Registration No. 55,170

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET ■ ALEXANDRIA, VIRGINIA 22314 ■ U.S.A.
TELEPHONE: 703-413-3000 ■ FACSIMILE: 703-413-2220 ■ WWW.OBLON.COM

40 years
1968-2008



Docket No.: 336549US



ATTORNEYS AT LAW

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

RE: Application Serial No.: 09/139,307
Applicants: SHIRAKAWA, Takahashi
Filing Date: August 24, 1998
For: THERMAL HEAD
Group Art Unit: 2861
Examiner: Tran

SIR:

Attached hereto for filing are the following papers:

Issue Fee Transmittal
Letter Submitting Replacement Drawing Sheets
Notice of Allowability Dated June 3, 1999 (copy)
PTO Form 948 Dated November 12, 1998 (copy)
6 Replacement Drawing Sheets

Credit card payment is attached hereto in the amount of **\$1,510.00** to cover any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. **15-0030**. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Richard L. Treanor

Richard L. Treanor
Registration No. 36,379

Customer Number

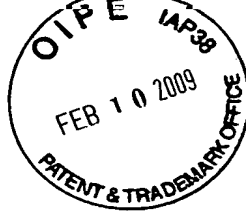
22850

(703) 413-3000 (phone)
(703) 413-2220 (fax)
(OSMMN 10/08)

Tia D. Fenton
Registration No. 55,170

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET ■ ALEXANDRIA, VIRGINIA 22314 ■ U.S.A.
TELEPHONE: 703-413-3000 ■ FACSIMILE: 703-413-2220 ■ WWW.OBLON.COM

Docket No.: 336549US



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION: SHIRAKAWA, Takashi, et al.

SERIAL NO.: 09/139,307

FILED: August 24, 1998

FOR: THERMAL HEAD

LETTER SUBMITTING REPLACEMENT DRAWING SHEET(S)

COMMISSIONER FOR PATENTS
Alexandria, VA 22313

SIR:

Responsive to the below indicated communication, the following drawing sheets are submitted herewith:

- ☒ 6 Replacement Drawing Sheets ☐ _____ New Drawing Sheets
☐ _____ Annotated Drawing Sheets
☐ Official Action dated _____
☒ Notice of Allowability, dated June 3, 1999 (2-pages, see attachment)
☒ PTO (948), dated November 12, 1998 (1 page, see attachment)
The changes and/or modifications made include the following:

The attached drawings Figs. 1-10 are Replacement (Formal) Drawing Sheets in response to the Notice of Draftperson's Patent Drawing Review (PTO 948), dated November 12, 1998 requesting new drawing sheets, along with page 2 (3rd paragraph) of the Notice of Allowability, dated June 3, 1999, indicating that Figs. 7A & 7B are missing and correction is required.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Richard L. Treanor
Registration No. 36,379

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 10/08)

Tia D. Fenton
Registration No. 55,170



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/139,307	08/24/98	SHIRAKAWA	T 9281/3130

WILLIAM F PRENDERGAST
BRINKS HOFER GILSON & LIONE
P O BOX 10395
CHICAGO IL 60610

MM61/0603

EXAMINER

TRAN, H ART UNIT	PAPER NUMBER 4
---------------------	----------------

2861
DATE MAILED:

06/03/99

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

COPY

NOTICE OF ALLOWABILITY

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

- ☐ This communication is responsive to _____
- ☒ The allowed claim(s) is/are 1-8
- ☐ The drawings filed on _____ are acceptable.
- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☒ received in Application No. (Series Code/Serial Number) 8/697,153
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

- ☒ Applicant MUST submit NEW FORMAL DRAWINGS

- ☐ because the originally filed drawings were declared by applicant to be informal.

- ☒ including changes required by the Notice of Draftperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____

- ☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

- ☐ including changes required by the attached Examiner's Amendment/Comment.

☒ including missing Figs 7A, 7B.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftperson.

- ☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Draftperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Interview Summary, PTO-413
- ☐ Examiner's Amendment/Comment
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☒ Examiner's Statement of Reasons for Allowance

Huan Tran

Huan Tran
Primary Examiner

Art Unit: 2861

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 08/697,153, filed on 08/20/96.

Oath/Declaration

2. Receipt is acknowledged of the executed Declaration and the appropriate filing fee.

Drawings

3. The drawings are objected to because Figs. 7A and 7B are missing from the 5 sheets of drawings filed which include Figs. 1-5, 6A-6C, 8 and 9. Correction is required.

Allowable Subject Matter

4. Claims 1-8 are allowed.

5. The following is an examiner's statement of reasons for allowance:

Prior art of record, in particular prior art to Shirakawa (US Patent No. 5,477,266) does not teach or suggest a second interlayer insulation layer comprised of insulating ceramic formed on the upper surface of the first interlayer insulation layer. Figs. 1-4 of Shirakawa shows a thermal head and a method of manufacturing, wherein an

9/139307

NOTICE OF DRAFTPERSON'S
PATENT DRAWING REVIEW

The drawing filed (insert date) 8/24/98:

A. ☒ not objected to by the Draftperson under 37 CFR 1.84 or 1.152.B. ☒ objected to by the Draftperson under 37 CFR 1.84 or 1.152 as indicated below. The Examiner will require submission of new, corrected drawings where necessary. Corrected drawings must be submitted according to the instructions on the back of this notice.

COPY

1. DRAWINGS. 37 CFR 1.84(a): Acceptable categories of drawings:
Black ink. Color.
Color drawing are not acceptable until petition is granted.
Fig.(s) _____
Pencil and non black ink is not permitted. Fig(s) _____
2. PHOTOGRAPHS. 37 CFR 1.84(b)
Photographs are not acceptable until petition is granted,
3 full-tone sets are required. Fig(s) _____
Photographs not properly mounted (must be on Bristol board or photographic double-weight paper). Fig(s) _____
Poor quality (half-tone). Fig(s) _____
3. TYPE OF PAPER. 37 CFR 1.84(e)
Paper not flexible, strong, white and durable.
Fig.(s) _____
Erasures, alterations, overwritings, interlineations, folds, copy machine marks not acceptable. (too thin)
Mylar, vellum paper is not acceptable (too thin).
Fig(s) _____
4. SIZE OF PAPER. 37 CFR 1.84(f): Acceptable sizes:
21.0 cm by 29.7 cm (DIN size A4)
21.6 cm by 27.9 cm (8 1/2 x 11 inches)
All drawings sheets not the same size.
Sheet(s) _____
5. MARGINS. 37 CFR 1.84(g): Acceptable margins:
Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm
SIZE: A4 Size
Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm
SIZE: 8 1/2 x 11
Margins not acceptable. Fig(s) _____
Top (T) _____ Left (L) _____
Right (R) _____ Bottom (B) _____
6. VIEWS. 37 CFR 1.84(h)
REMINDER: Specification may require revision to correspond to drawing changes.
Views connected by projection lines or lead lines.
Fig.(s) _____
Partial views. 37 CFR 1.84(h)(2)
Brackets needed to show figure as one entity.
Fig.(s) _____
Views not labeled separately or properly.
Fig.(s) _____
Enlarged view not labeled separately or properly.
Fig.(s) _____
7. SECTIONAL VIEWS. 37 CFR 1.84(h)(3)
Hatching not indicated for sectional portions of an object.
Fig.(s) _____
Sectional designation should be noted with Arabic or Roman numbers. Fig.(s) _____
8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)
Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned, so that the top becomes the right side, except for graphs. Fig.(s) _____
Views not on the same plane on drawing sheet. Fig.(s) _____
9. SCALE. 37 CFR 1.84(k)
Scale not large enough to show mechanism without crowding, when drawing is reduced in size to two-thirds in reproduction.
Fig.(s) _____
10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(l)
Lines, numbers & letters not uniformly thick and well defined, clean, durable and black (poor line quality).
Fig.(s) 8
11. SHADING. 37 CFR 1.84(m)
Solid black areas pale. Fig.(s) _____
Solid black shading not permitted. Fig.(s) _____
Shade lines, pale, rough and blurred. Fig.(s) _____
12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p)
Numbers and reference characters not plain and legible.
Fig(s) 1, 3, 4, 9, 1, 4, 10
Figure legends are poor. Fig.(s) 1, 4, 10
Numbers and reference characters not oriented in the same direction as the view. 37 CFR 1.84(p)(3) Fig.(s) _____
English alphabet not used. 37 CFR 1.84(p)(3) Fig.(s) _____
Numbers, letters and reference characters must be at least .32 cm (1/8 inch) in height. 37 CFR 1.84(p)(3) Fig.(s) 5, 1, 4, 3
13. LEAD LINES. 37 CFR 1.84(q)
Lead lines cross each other. Fig.(s) _____
Lead lines missing. Fig.(s) _____
14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.84(u)
Sheets not numbered consecutively, and in Arabic numerals beginning with number 1. Fig.(s) _____
15. NUMBERING OF VIEWS. 37 CFR 1.84(u)
Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig.(s) _____
16. CORRECTIONS. 37 CFR 1.84(w)
Corrections not made from PTO-948 dated _____
17. DESIGN DRAWINGS. 37 CFR 1.152
Surface shading shown not appropriate. Fig.(s) _____
Solid black shading not used for color contrast.
Fig.(s) _____

COMMENTS

REVIEWER

W/S

DATE

11/12/98

TELEPHONE NO.

7033058404

ATTACHMENT TO PAPER NO.

APPLICANT'S COPY